

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (currently amended). An isolated or recombinant nucleic acid comprising at least one artificially mutated nucleotide relative to ~~a polynucleotide sequence of~~ SEQ ID NO: 1 or the complementary polynucleotide sequence thereof, wherein the mutated nucleotide comprises one [[of]] or more of: a deleted nucleotide, an inserted nucleotide, or a substituted nucleotide, and wherein the nucleic acid comprises:

(a) a polynucleotide sequence that is greater than 97.8% identical to SEQ ID NO: 1 or the complementary polynucleotide sequence thereof, as determined by Nucleotide-Nucleotide Basic Local Alignment Search Tool (BLASTN) using default parameters, wherein the polynucleotide sequence encodes an infectious, replicating respiratory syncytial virus (RSV); or

(b) a polynucleotide sequence encoding an amino acid sequence or unique subsequence selected from the group consisting of (i) an amino acid sequence that is greater than 99.3% identical to SEQ ID NO:2, (ii) an amino acid sequence that is greater than 98.4% identical to SEQ ID NO:3, (iii) an amino acid sequence that is greater than 99.7% identical to SEQ ID NO:4, (iv) an amino acid sequence that is greater than 98.3% identical to SEQ ID NO:5, (v) an amino acid sequence that is greater than 99.6% identical to SEQ ID NO:6, (vi) an amino acid sequence that is greater than 97.0% identical to SEQ ID NO:7, (vii) an amino acid sequence that is greater than 99.3% identical to SEQ ID NO:8, (viii) an amino acid sequence that is greater than 99.5% identical to SEQ ID NO:9, (ix) an amino acid sequence that is greater than 96.4% identical to SEQ ID NO:10, and (x) an amino acid sequence that is greater than 99.2% identical to SEQ ID NO:11, as determined by BLASTP using default parameters, wherein an RSV that comprises the amino acid sequence is infectious and replicating.

Claim 2 (previously presented). The nucleic acid of claim 1, wherein the nucleic acid is selected from the group consisting of a DNA, a cDNA, an RNA, and an artificial nucleic acid.

Claim 3 (canceled)

Claim 4 (previously presented). The nucleic acid of claim 1, wherein the polynucleotide sequence of (a) is at least 98.5% identical to SEQ ID NO:1 or the complementary polynucleotide sequence thereof, as determined by BLASTN using default parameters.

Claims 5 – 9 (canceled)

Claim 10 (previously presented). The nucleic acid of claim 1, wherein at least one polypeptide encoded by the nucleic acid comprises at least one deleted, inserted, or substituted amino acid residue.

Claim 11 (previously presented). The nucleic acid of claim 10, wherein the polypeptide comprises at least one substituted amino acid residue wherein the substitution is a substitution of a first amino acid with a second amino acid wherein the first amino acid and the second amino acid are both within the same one of the following groups of amino acids: (i) Alanine, Serine, and Threonine; (ii) Aspartic acid and Glutamic acid; (iii) Asparagine and Glutamine; (iv) Arginine and Lysine; (v) Isoleucine, Leucine, Methionine, and Valine; or (vi) Phenylalanine, Tyrosine, and Tryptophan.

Claim 12 (previously presented). The nucleic acid of claim 1, wherein the at least one artificially mutated nucleotide is located in the open reading frame encoding the polypeptide of SEQ ID NO:12.

Claim 13 (canceled)

Claim 14 (previously presented). The nucleic acid of claim 1, wherein the open reading frame encoding the polypeptide of SEQ ID NO:12 is deleted, or wherein the open reading frame encoding the polypeptide of SEQ ID NO:10 is deleted.

Claim 15 (previously presented). The nucleic acid of claim 12, wherein the at least one artificially mutated nucleotide comprises a deletion, and wherein the nucleotides encoding amino acid residues 164 – 197 of SEQ ID NO:12 are deleted.

Claim 16 (previously presented). The nucleic acid of claim 1, wherein the at least one artificially mutated nucleotide is located in the open reading frame encoding the polypeptide of SEQ ID NO:10.

Claims 17 – 18 (canceled)

Claim 19 (original). The nucleic acid of claim 16, wherein at least one of the nucleotides encoding amino acid residue 1, amino acid residue 4, amino acid residue 10, or a combination thereof, of SEQ ID NO:10 is mutated.

Claim 20 (previously presented) The nucleic acid of claim 1, wherein the unique polynucleotide subsequence of (b) comprises at least one complete open reading frame which encodes a polypeptide selected from the group consisting of SEQ ID NOs:2-12; or comprising a plurality of complete open reading frames.

Claims 21 – 66 (canceled)

Claim 67 (previously presented). An isolated or recombinant nucleic acid comprising at least one artificially mutated nucleotide relative to SEQ ID NO:1, wherein the mutated nucleotide comprises one or more of: a deleted nucleotide, an inserted nucleotide, or a substituted nucleotide, and wherein the nucleic acid comprises at least one unique polynucleotide subsequence comprising at least 500 contiguous nucleotides of SEQ ID NO:1 or the complementary polynucleotide sequence thereof.

Claims 68 – 69 (canceled)

Claim 70 (previously presented). The nucleic acid of claim 67 wherein the nucleic acid comprises at least one unique polynucleotide subsequence comprising at least 1000 contiguous nucleotides of SEQ ID NO:1.

Claim 71 (withdrawn). The nucleic acid of claim 67 wherein the unique polynucleotide subsequence encodes at least 20, at least 50, at least 100, or at least 200 contiguous amino acid residues of any one of SEQ ID NOS:2 – 8, 11, and 12.

Claim 72 (previously presented). The nucleic acid of claim 67, wherein the nucleic acid further comprises at least one polynucleotide subsequence from a different strain of virus, at least one polynucleotide subsequence from a different strain of human RSV, or at least one polynucleotide subsequence from a different species of virus.

Claim 73 (withdrawn). The nucleic acid of claim 71 wherein the unique polynucleotide subsequence encodes at least 200 contiguous amino acid residues of SEQ ID NO:8 or at least 200 contiguous amino acid residues of SEQ ID NO:11.

Claim 74 (canceled)

Claim 75 (previously presented). The isolated or recombinant nucleic acid of claim 1, wherein the isolated or recombinant nucleic acid comprises a polynucleotide sequence encoding an amino acid sequence that is greater than 99.5% identical to SEQ ID NO:9.

Claim 76 (previously presented). The isolated or recombinant nucleic acid of claim 75, wherein the amino acid sequence is the amino acid sequence of SEQ ID NO:9.

Claim 77 (withdrawn). The nucleic acid of claim 67 wherein the unique polynucleotide subsequence encodes at least 200 contiguous amino acid residues of any one of SEQ ID NOS:4 – 6, 8, 11, and 12.

Claim 78 (previously presented). The nucleic acid of claim 67 wherein the unique polynucleotide subsequence encodes at least 50 contiguous amino acid residues of SEQ ID NO:10.